## List of Abbreviations

> Greater Than < Less Than

ASCE American Society of Civil Engineers
ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand BMPs Best Management Practices

CDPHE Colorado Department of Public Health and Environment

CDPS Colorado Discharge Permit System

cfs Cubic Feet Per Second
COD Chemical Oxygen Demand
CRS Colorado Revised Statutes

CUHP Colorado Urban Hydrograph Procedure

CWC Constructed Wetland Channel

CWCB Colorado Water Conservation Board

CWQCC Colorado Water Quality Control Commission
CWQCD Colorado Water Quality Control Division
DCIA Directly Connected Impervious Areas

DCM Drainage Criteria Manual DO Dissolved Oxygen

DRCOG Denver Regional Council of Governments
DRURP Denver Regional Urban Runoff Program

EDB Extended Detention Basin EMC Event Mean Concentration

EPA U.S. Environmental Protection Agency

ET Evapo-transpiration

EURV Excess Urban Runoff Volume

fps Feet per second

ft Feet

FHWA Federal Highway Administration

GB Grass Buffer GS Grass Swale

H:V Horizontal to Vertical Ratio of a Slope

HSG Hydrologic Soil Group

i Impervious Ratio of a Catchment (I<sub>a</sub>/100)
I<sub>a</sub> Percent Imperviousness of Catchment

LEED Leadership in Energy and Environmental Design

LID Low Impact Development
MCM Minimum Control Measure
mg/L Milligrams per Liter

µg/L Micrograms per Liter

MDCIA Minimize Directly Connected Impervious Areas

MEP Maximum Extent Practicable

MS4 Municipal Separate Storm Sewer System

MSDS Material Safety Data Sheets

MWCOG Metropolitan Washington Council of Governments

N/A Not applicable

NPDES National Pollution Discharge Elimination System

NPV Net Present Value

NRCS Natural Resources Conservation Services
NTIS National Technical Information Service

NTU Nephelometric turbidity units NURP Nationwide Urban Runoff Program

NVDPC Northern Virginia District Planning Commission

PA Porous Asphalt PC Pervious Concrete

PICP Permeable Interlocking Concrete Pavers

PLD Porous Landscape Detention (term replaced by Bioretention in 2010 update)

PPS Pervious Pavement System

ppm Parts Per Million RP Retention Pond

RPA Receiving Pervious Area

SCS Soil Conservation Service (now the NRCS)

SEWRPC Southeastern Wisconsin Regional Planning Commission

SF Sand Filter Extended Detention

SPA Separate Pervious Area

SWMM Stormwater Management Model (EPA)

SWMP Stormwater Management Plan

TOC Total Organic Carbon

TMDL Total Maximum Daily Load

TP Total Phosphorus
TSS Total Suspended Solids

UDFCD Urban Drainage and Flood Control District

UIA Unconnected Impervious Area
USCC United States Composting Council
USDCM Urban Storm Drainage Criteria Manual

USGS United States Geological Survey

WERF Water Environment Research Foundation

WQCV Water Quality Capture Volume

## **Definitions**

<u>Best Management Practices (BMPs)</u> - schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of State waters. BMPs also include treatment, operating procedures, and practices to control site runoff, spillage or leaks, waste disposal, or drainage from material storage. BMPs include structural and nonstructural controls.

City Engineer -the City Engineer or his/her designated representative.

<u>Clean Water Act</u> - the Federal Water Pollution Control Act (33 USC section 1251 et seq.), and any subsequent amendments.

<u>Construction activity</u> - construction activity refers to ground surface disturbing activities, which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

<u>Dedicated Asphalt Plants and Concrete Plants</u> - portable asphalt plants and concrete plants that are located on or adjacent to a construction site and that provide materials only to that specific construction site.

<u>Earth Disturbance/Earth Disturbing Activity</u> - a man-made alteration or disturbance of the ambient land surface, natural cover or topography of land, including all grading, cut and fill, stockpiling of imported fill, building, paving, landscaping and other activities which may result in, or contribute to, soil erosion or sedimentation of the Waters of the State.

Erodibility -the susceptibility of a particular soil type to erosion by water or wind.

<u>Erosion</u> - the wearing away of the land surface by water, wind, ice or other geological agents, including the detachment and movement of soil or rock fragments by water, wind, ice, gravity, or any combination thereof.

Erosion Control Measures -practices that slow or stop erosion.

<u>Excess Urban Runoff Volume (EURV)</u>: EURV represents the difference between the developed and pre-developed runoff volume for the range of storms that produce runoff from pervious land surfaces (generally greater than the 2-year event).

<u>Final Stabilization</u> -when all earth disturbing activities at the site have been completed, and uniform vegetative cover has been established with (for purposes of an Erosion and Stormwater Quality Control Permit) a density of at least 70 percent of pre-disturbance levels and such cover is capable of adequately controlling soil erosion, as determined by the City Engineer, or equivalent permanent, physical erosion reduction methods have been employed. Also includes installation of permanent roads and structural stormwater quality BMPs and removal of all temporary sediment controls.

<u>Full Spectrum Detention:</u> this practice utilizes capture and slow release of the EURV and better replicates historic peak discharges for the full range of storm events compared to multi-stage detention practices (per UDFCD).

<u>Illicit Discharge</u> - any discharge to a Municipal Separate Storm Sewer System (MS4) that is not composed entirely of stormwater except for sources excluded in City Code.

<u>Larger common plan of development or sale:</u> a site where multiple separate and distinct construction activities may be taking place at different times on different schedules.

<u>Low Impact Development (LID):</u> LID is a comprehensive land planning and engineering design approach to managing stormwater runoff with the goal of mimicking the pre-development hydrologic regime. LID emphasizes conservation of natural features and use of engineered, on-site, small-scale hydrologic controls that infiltrate, filter, store, evaporate, and detain runoff close to its source. The terms Green Infrastructure and Better Site Design are sometimes used interchangeably with LID.

<u>LID Practice</u>: LID practices are the individual techniques implemented as part of overall LID development or integrated into traditional development, including practices such as bioretention, green roofs, permeable pavements and other infiltration-oriented practices.

<u>Mapping Unit</u> - soil name and symbol given in the NRCS Soil Survey for each soil type. Most areas of the Colorado Springs metropolitan area are included in a soil survey.

<u>Maximum Extent Practicable (MEP):</u> MEP is the statutory standard that establishes the level of pollutant reductions that MS4 operators must achieve implementation of best management practices designed to control stormwater runoff from the MS4 is generally the most appropriate and practicable approach for reducing pollutants to satisfy the technology standard of MEP. This narrative standard does not currently include numeric effluent limits.

Minimizing Directly Connected Impervious Area (MDCIA): MDCIA includes a variety of runoff reduction strategies based on reducing impervious areas and routing runoff from impervious surfaces over grassy areas to slow runoff and promote infiltration. The concept of MDCIA has been recommended by UDFCD as a key technique for reducing runoff peaks and volumes following urbanization. MDCIA is a key component of LID.

<u>Municipal Separate Storm Sewer System (MS4)</u> -a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State, city, town, county, or other public body and designed or used for collecting or conveying stormwater.

NPDES - as authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches.

<u>Permanent</u> -will remain in place for a long period of time (referring to a land-surface cover or erosion and sediment control measure).

Runoff Coefficient - the fraction of total rainfall that will appear as runoff.

<u>Sedimentation</u>-the process of solid materials, both inorganic (mineral) and organic, coming to rest on the earth's surface either above or below sea level.

<u>Sediment</u>-particulate solid material, either inorganic or organic, that will settle or be deposited in a liquid under the force of gravity.

<u>Source Control Measures - practices that control pollutants where they originate and reduce pollutants from becoming entrained in stormwater</u>

<u>Stormwater</u> - precipitation-induced surface runoff.

<u>Stormwater Management</u> – anything associated with the planning, maintenance, and regulation of facilities which collect, store, treat or convey stormwater

<u>Structural Controls</u> - include facilities and structures which detain or retain stormwater or provide for infiltration or evaporation of stormwater, for the purpose of or with the result of water quality enhancement.

<u>Temporary</u> -planned to be removed or inactivated after a period of time (referring to installation of erosion or sediment control measures, either structural or nonstructural).

Treatment Train – a series of two or more stormwater treatment measures or BMPs

<u>Waters of the State (State Waters)</u> - any and all surface and subsurface waters which are contained in or flow in or through this State, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. For the purposes of this permit, State Waters does not include subsurface waters.

<u>Water Quality Capture Volume (WQCV):</u> this volume represents runoff from frequent storm events such as the 80th percentile storm. The volume varies depending on local rainfall data. Within the Colorado Springs area, the WQCV is based on runoff from 0.6 inches of precipitation.